

REMARKS

Claim 17 has been amended.

The Examiner has rejected applicants' claim 17 under 35 USC 101 because the claimed invention is directed to non-statutory subject matter. The Examiner has argued that claim 17 is not statutory, directed to program, per se, the claimed is control program being executed just comprising the code of a feature calculation step, code of an acquisition step, code of a similarity calculation step, code of a retrieval step, the codes are not used to produce the useful and tangible result, whether their execution accomplishes a practical application. Applicants have amended applicants' claim 17 to delete the recitation "code of" so as to recite the steps performed by the control program that is executed and implemented in a computer system. Applicants believe that amended claim 17 is directed to a practical application with a useful, concrete and tangible result and is directed to statutory subject matter in compliance with 35 USC 101.

The Examiner has rejected applicants' claims 1-3, 7, 9-11, 15, 17, 19 and 20 under 35 USC 103(a) as being unpatentable over the De Bonet (U.S. 5,899,999) patent in view of the Ikeda (U.S. 5,801,773) patent.

The constructions recited in applicants' independent claims 1, 9, 17, 19 and 20 are not taught or suggested by the cited art of record. In particular, the Examiner has acknowledged that the De Bonet patent does not disclose acquisition means for generating a plurality of image feature sets by multiplying an image feature included in an image feature set stored in the storage means, by a constant and acquiring a plurality of image feature sets regarding one image by varying the constant. The Examiner has, however, argued that the Ikeda patent discloses acquisition means for generating plurality of image feature sets by multiplying an

image feature included in an image feature set stored in the storage means, by a constant and acquiring plurality of image feature sets regarding one image by varying the constant (col. 18, lines 19-36).

Applicants have reviewed the cited and other portions of the Ikeda patent and believe that there is no teaching or suggestion in the cited reference of generating a plurality of image feature sets by multiplying an image feature included in an image feature set stored in the storage means by a constant or variable, and acquiring a plurality of image feature sets regarding one image by varying the constant. More particularly, the Ikeda patent discloses a combining processor 206 for combining a standard luminance signal Y_n of a standard image luminance signal and a non-standard luminance signal Y_c of a non-standard, i.e. over exposed or under exposed, luminance signal, so as to enlarge dynamic range and to produce a combined luminance signal Y_g . Col. 17, line 64 to Col. 18, line 4. The Ikeda patent also discloses a color processor which compares the combined luminance signal Y_g with the standard luminance signal Y_n to obtain a coefficient K and generates combined color signals R_g , G_g and B_g by multiplying standard color signals R_n , G_n and B_n of the standard image luminance signal by the coefficient K . Col. 17, lines 27-44 and Col. 18, lines 13-36.

The Ikeda patent makes no mention of using a variable or of varying a coefficient to obtain multiple feature sets regarding one image. Instead, in the Ikeda patent, only one image feature set, i.e. the combined color signal $R_gG_gB_g$ value set, is obtained by multiplying a standard image feature set, the standard color signal $R_nG_nB_n$ value set, by one coefficient which is obtained based on the Y_g/Y_n ratio. Accordingly, applicants' independent claims 1, 9, and 17, each of which recites generating a plurality of image feature sets by multiplying an image feature included in an image feature set stored in the storage means by a constant and

acquiring a plurality of image feature sets regarding one image by varying the constant, and their respective dependent claims, patentably distinguish over the cited De Bonet and Ikeda patents. Applicants' independent claims 19 and 20, each of which recites generating a plurality of image feature sets by multiplying the image feature set of the retrieval source image or the image feature set of the selected image by a variable, and their respective dependent claims, therefore also distinguish over the De Bonet and the Ikeda patents.

Moreover, the cited De Bonet and Ikeda patents fail to teach or suggest using the plurality of image feature sets, generated by multiplying an image feature included in an image feature set by a constant or a variable, to compare with a set of image features of another image to obtain multiple degrees of similarity. Specifically, applicants' invention recited in applicants' independent claims 1, 9, 17, 19 and 20 is characterized by generating multiple image feature sets for one image and comparing each of the generated plurality of feature sets with an image feature set for another image to obtain a set of degrees of similarity for the two images.

The De Bonet patent cited by the Examiner discloses an image retrieval system which compares a group of query images provided by a user with test images stored in an image database and returns, as its results, the images from the image database that are most similar to the query images. In particular, the De Bonet patent teaches calculating an average signature vector and a variance vector to collectively describe all of the query images and determining a measure of similarity between each test image in the image database and the query images by comparing a signature of the test image to the average and variance vectors of the query images. Col. 12, lines 17-56; Col. 13, line 16 to Col. 14, line 26. That is, the De Bonet patent teaches determining similarity between a retrieval source image, i.e. query

images, and a stored image, i.e. test image, by comparing the image feature set of the stored image, i.e. the signature of the test image, against the image feature set of the retrieval source image, i.e. the average and variance vectors of the query images, and producing one degree of similarity, i.e. similarity measure, between the two images.

There is no teaching or suggestion in the De Bonet patent of determining similarity between two images using multiple image feature sets for one image, which are generated by multiplying the image feature set of the image by a variable, and calculating a set of degrees of similarity between two images. Instead, De Bonet teaches using one image feature set that describes all of the query images and one image feature set that describes the test image to determine only one similarity measure (degree of similarity) between the images being compared.

Moreover, the Ikeda patent also fails to teach or suggest generating a plurality of image feature sets by multiplying the image feature set of one of the images by a constant or variable and using the plurality of image feature sets to calculate a set of degrees of similarity between two images. In particular, as argued by applicant above, the Ikeda patent only teaches generating one image feature set, i.e., the combined color signals RgGgBg set, and fails to teach or suggest generating a plurality of image feature sets by multiplying the image feature set of an image by a variable. Accordingly, the Ikeda patent does not, and cannot, teach or suggest using multiple image feature sets to calculate a set of degrees of similarity.

Applicants' independent claims 1, 9 and 17, each of which recites generating a plurality of image feature sets by multiplying an image feature included in an image feature set stored in the storage means by a constant and acquiring a plurality of image feature sets regarding one image by varying the constant, and calculating degree of similarity between

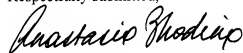
each image feature set of the acquired plurality of image feature sets and the image feature set of the retrieval source image, and their respective dependent claims, thus patentably distinguish over the De Bonet patent and the Ikeda patent, taken alone or in combination. Applicants' independent claims 19 and 20, each of which recites generating a plurality of image feature sets by multiplying the image feature set of the retrieval source image or the image feature set of the selected image by a variable, and calculating a set of degrees of similarity between the retrieval source image and the selected image using the plurality of feature sets, and their respective dependent claims, likewise patentably distinguish over the De Bonet and the Ikeda patents.

In view of the above, it is submitted that applicants' claims patentably distinguish over the cited art of record. Accordingly, reconsideration of the claims and passage of same and this application to issue is respectfully requested.

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